

PROVIDING

- Geotechnical Engineering
- Construction Materials Engineering
- Environmental Engineering
- Drilling
 Services

November 7, 2001 Project No. 97664V3

Mr. Todd Croft Nevada Division of Environmental Protection 555 E. Washington, Suite 4300 Las Vegas, NV 89101-1049

Results of monthly surface water sampling of the Las Vegas Wash at the Northshore Road Bridge.

Dear Mr. Croft:

RE:

Per your request, Geotechnical & Environmental Services, Inc. (GES) obtained a surface water sample from the Las Vegas Wash on October 25, 2001 near the Northshore Road Bridge. We sent this sample, under chain-of-custody protocol, to NEL Laboratories (NEL) for laboratory analysis of perchlorate. NEL's analysis revealed a perchlorate concentration of 420 micrograms per Liter (μ g/L). The NEL report is included with this letter, along with Perchlorate Summary Tables for 2000 and 2001.

In addition to the sample GES collected and submitted to NEL, a split sample was collected per the request of Mr. Kevin Mayer, with the US Environmental Protection Agency (USEPA). This split sample was collected at the same time and in the same manner as the sample submitted to NEL, and was sent, under chain-of-custody protocol, to the USEPA Laboratory in Richmond, California.

Our services were performed using that degree of care and skill ordinarily exercised under similar circumstances by reputable engineering firms in this or similar localities. No other warranty, either express or implied, is included or intended in this report. We appreciate this opportunity to provide our services. If you have any questions regarding these results, please feel free to call us at 365-1001.

Sincerely,

Geotechnical & Environmental Services, Inc.

Richard Cooke Staff Geologist

Richard Cooke

Daniel C. Burns, C.E.M.*
#1692 (Expires 10/07/2003)

#1692 (Expires 10/07/2003)

Project Manager

*"I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances."

dn

Enc:

2000 & 2001 Perchlorate Summary Tables

NEL Analytical Report

Dist:

1 original mailed to addressee

1 faxed to addressee at 486-2863

cc: fax to Jeff Gibson, American Pacific Corporation

cc: mail to Kevin Mayer, USEPA SFD 72, 75 Hawthorne Street, San Francisco, CA 94105

cc: to project file 97664V3

7150 Placid Street Las Vegas, NV 89119 (702) 365-1001 • Fax (702) 341-7120 www.gesnevada.com

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Las Vegas Wash at Northshore Road Bridge 2000 Summary of Perchlorate Concentrations

Date Sampled	Perchlorate (μg/L)
1/27/00	569
2/28/00	720
3/29/00	870
4/27/00	750
5/30/00	740
6/28/00	410
7/27/00	650
8/28/00	510
9/27/00	430
10/26/00	340
11/29/00	370
12/26/00	320

Las Vegas Wash at Northshore Road Bridge 2001 Summary of Perchlorate Concentrations

Date Sampled	Perchlorate (μg/L)
1/25/01	280
2/27/01	350
3/27/01	480
4/26/01	320
5/29/01	240
6/27/01	400
7/25/01	550
8/27/01	420
9/27/01	460
10/25/01	420

NEL LABORATORIES

Reno • Las Vegas Phoenix • Boise Las Vegas Division 4208 Arcata Way, Suite A • Las Vegas, Nevada 89030 **702-657-1010** • Fax: 702-657-1577 1-888-368-3282

F

CLIENT:

Geotechnical & Env. Serv.

7150 Placid

Las Vegas, NV 89119

ATTN:

Dan Burns

PROJECT NAME:

FPF

PROJECT NUMBER: 97664 V3

NEL ORDER ID: L0110267

Attached are the analytical results for samples in support of the above referenced project.

Samples submitted for this project were not sampled by NEL Laboratories. Samples were received by NEL in good condition, under chain of custody on 10/25/01.

Should you have any questions or comments, please feel free to contact our Client Services department at (702) 657-1010.

Stan Van Wagenen

Laboratory Manager

CERTIFICATIONS:

RenoLas VegasS. CaliforniaArizonaAZ0520AZ0518AZ0605California170720022264US Army CorpsCertifiedCertified

of Engineers

IdahoRenoLas VegasS. CaliforniaIdahoCertifiedCertifiedMontanaCertifiedCertifiedNevadaNV033NV052CA084L.A.C.S.D.10228

CLIENT:

Geotechnical & Env. Serv.

PROJECT ID:

FPF

PROJECT #:

97664 V3

TEST: MATRIX: **Inorganic Non-Metals**

Aqueous

CLIENT ID: North Shore Road Bridge

DATE SAMPLED: 10/25/01

NEL SAMPLE ID: L0110267-01

PARAMETER	RESULT	R. L.	<u>D. F.</u>	METHOD	UNITS	ANALYZED
Perchlorate	420	40.	10	EPA 314	$\mu g/L$	11/5/01

R.L. - Reporting Limi

D.F. - Dilution Factor

ND - Not Detected

CLIENT:

Geotechnical & Env. Serv.

PROJECT ID:

FPF

PROJECT #:

97664 V3

CLIENT ID:

Method Blank

DATE SAMPLED: NA

NEL SAMPLE ID: 011105CLO4-BLK

TEST:

Non-Metals

REPORTING

RESULT LIMIT D.F.

METHOD

UNITS **ANALYZED**

Perchlorate

PARAMETER

ND

4

EPA 314

 $\mu g/L$

11/5/01

D.F. - Dilution Factor

ND - Not Detected

This report shall not be reproduced except in full, without the written approval of the laboratory.

NEL LABORATORIES CHAIN OF CUSTODY

NEL Work Order: <u>LO110267</u>

Project Number: (7.7 664 U.3	9	Analysis // // // // // // // // // // // // //		Remarks				Box #1 DW - Drinking Water SD - Solid Box #2 A. HCI E. Ice Only WW - Waste Water AQ - Aqueous B. HNO, F. Other CL - Oil/Organic Liquid A - Air D. NaOH	Received by (Print) (Signature) Date/Time
Project Name: F- P	Purchase Order Number:	4	ers #1)	# of Containe Matrix (Box Preservative	1. 1. 8. A.				Date/Time Rec
Reno • Las Vegas • Boise Phoenix • Sacramento	Las Vegas Division • 4208 Arcata Way, Suite A • Las Vegas, Nevada 89030	702-657-1010 • Fax: 702-657-1577 • 888-368-3282	Fax Number: Population Date:	1: (2) 5-day 2-day 1-day Other NE.L. Customer Sample Identification Identification	اية			act? Y N None Temp.	(Signature)
	Las Vegas Division • 4208 Arcata \	702-657-1010 • Fax: 7/ Company:	Umber:	Requested Turnaround: (4) Time/Date Sampled Custom	27V 16			Custody Seal intact? Y N	Relinquished by (Print)

The liability of NEL Laboratories Inc. is limited strictly to the price of sample analysis for those samples received in good condition by NEL. NEL is not responsible for loss, damage, resampling costs and/or qualified data related to samples not received in good condition. Signature of this CoC constitutes a purchase order for NEL to perform work and constitutes acceptance of all NEL Standard Terms and Conditions. Signature also constitutes acceptance of NEL turnaround times are measured in regular working days. Samples received at the time of sample receipt. NEL turnaround times are measured in regular working days. Samples received turnaround time will be confirmation transmitted to the fax number provided above.

LETTER OF TRANSMITTAL

GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC.

7150 Placid Street Las Vegas, Nevada 89119 (702) 365-1001 (702) 341-7120 (FAX)

TO:	USEPA SFD 72			Date:		November 7, 2001		
	75 Hawthorne Street		_ PROJECT:			@ the		
	San Francisco, California	94105			1	Northshore Road	Bridge	
ATTN:	Mr. Kevin Mayer	GES PROJE	CT#	97664V3				
WE ARI	E FORWARDING THE ITEM	IS LISTED BEL	.OW VIA:					
	MESSENGER	PICK UP	x	U.S.	MAIL	"NE	XT DAY"	
COPIES	DESCRIPTION							
1	Results of monthly s	surface water s	sampling of	the Las	s Vegas V	Vash at the North	shore Road	
	Bridge.							

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THESE	ITEMS ARE SENT FOR:	REVIEW	CO	MMENT	Г	APPROVAL	USE	
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RECEIV	ED BY:	TIM	E:		D	ATE:		
OTHER	DISTRIBUTION:							

If enclosures are not as noted, please notify us at once.